Just the Facts...and the Data

Reporting Indiana’s recycling numbers

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Emerge Knowledge
An Inglorious Beginning...

- Prior to 2014, recycling rates were calculated from waste diversion data—not very accurate or verifiable
- In 2014, we began the shift to direct data collection, when Indiana’s legislature established a 50 percent recycling goal for the state, requiring Indiana recyclers to report, in tons, the types of recyclable material that they ship to in-state recycler facilities, in-state manufacturers/end users, or out-of-state destinations
Legislative Action – HEA 1183

• Passed in 2014, mandated that recyclers submit recycling data to IDEM
• Mandated that IDEM develop a reporting form by July 1, 2015
• Mandated that the IDEM commissioner submit an annual recycling activity report
• Recycling activities are required to be reported to IDEM during a calendar year (January 1–December 31), either on an annual basis or on a quarterly basis
• Reports are to be submitted by the recycler where recycling activities are conducted
The action of recycling is the recovery of municipal waste materials (MSW) such as garbage, refuse, industrial lunchroom waste, office waste, or other similar material from the waste stream for use or reuse, conversion into raw materials, or for use in the production of new products.

- Because MSW also consists of grass clippings and food scraps, IDEM includes composting and wood waste as part of the “Other” material type.
Who Is a “Recycler”?

• A recycler is defined as the owner or operator of a facility where recycling may occur, including a landfill, an incinerator, a material recovery facility (MRF) or a solid waste management district – must report

• A recycler is also defined as a recyclable materials broker, who arranges the collection, transportation, delivery, recycling or reuse of recyclable materials – must report

• Persons managing wastes not defined as municipal, such as those involved in automotive scrap metal processing, automotive salvage, or industrial wastes are not required to report, but may do so voluntarily
Materials Reported

Materials to be reported include:

• 1) Glass
• 2) Metal, including white goods (ferrous)
• 3) Metal (non-ferrous)
• 4) Paper and cardboard (all grades)
• 5) Plastic and plastic products
• 6) Single stream recyclable materials
• 7) Any other distinct type of recyclable material not specified in 1) through 6)
Enter Re-TRAC Connect

- As mandated by HEA 1183, IDEM published a recycling activity form in 2015, but that's not an efficient way to collect and analyze information.
- Recycling Activity Quarterly and Annual report surveys went live in October 2015.
- Additional reports and registrations were developed and deployed throughout 2016.
IDEM Reports Available

1. Recycling Activity Report for Recycler Facility
2. Solid Waste Land Disposal Facility Quarterly Report
3. Solid Waste Processing Facility Quarterly Report
4. Registered Composting Facility Report
5. Waste Tire Annual Report
6. E-Waste Manufacturer and Recycler Registration and Report
Benefits

• Simplified data entry for reporters
• Bring forward from previous submittal so only changes need to be updated
• Real-time validation of entered data
• Efficient summarization of data from multiple reports and report types
• Posting of reports for public view via RecycleSearch
Reporting

• IDEM Recycling Activity Reporting webpage (www.idem.IN.gov/recycle/2448.htm)
• Search for “Recycling Activity Reporting” from any IDEM webpage
Reporting to IDEM Program

1. In Re-TRAC Connect, create an account
2. Set up an Organization profile
   - When self-registering to report Recycling Activity, select ‘Recycler Facility’ as the Organization type
   - Composting Facility, Landfill, Processing Facility, Transfer Station, Waste Tire Facility, or Waste to Energy Plant facilities are pre-registered by IDEM
     • If facility is not registered, contact OLQRegulatoryReporting@idem.IN.gov
3. You will immediately have access to the Recycling Activity General Information survey
4. Questions or issues should be emailed to OLQRegulatoryReporting@idem.IN.gov
General Information Survey
Recycling Activity Report

SHIPMENTS OF RECYCLABLES TO RECYCLER FACILITIES (TONS)

Report the tons of recyclables sent to each recycler facility. List the name and location of the receiving recycler facility and give the amount of recyclables by material type. A recycler facility conducts intermediate consolidating, sorting, shredding, or-baling operations. Examples include material recovery facilities, transfer stations, and drop-off centers. In-state shipments will also be reported by the receiving recycler facility. E-waste shipments should not be reported on this form. They are to be reported on Section A of the Electronics Recycling Annual Report and E-Cycle Collector/Recycler Registration.

<table>
<thead>
<tr>
<th>FACILITY NAME *</th>
<th>STATE / COUNTRY *</th>
<th>CITY *</th>
<th>GLASS</th>
<th>PAPER</th>
<th>PLASTIC</th>
<th>SINGLE STREAM / MIXED</th>
<th>METAL FERROUS</th>
<th>METAL NON-FERROUS (NON-MSW)</th>
<th>METAL NON-FERROUS (NON-MSW)</th>
<th>OTHER MATERIAL</th>
<th>OTHER MATERIAL AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>CL</td>
<td>Cc</td>
<td>WH</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: If you are reporting Shipments of Recyclables to Recycler Facilities, click the 'Add' button above to add your first row to the table.

Total Tons of Material Sent to Recycler Facilities: 44
Analytics and Exports

Analytics
- E-Cycle Collector/Recycler Report
- E-Cycle Credits Available Report
- E-Cycle Manufacturer Report
- E-Cycle Summary Report
- E-Cycle VDDs Report
- Member Survey Status
- Shipments of Recyclables by Material Type and Destination
- Shipments of Recyclables by Recycler and Material Source
- Shipments of Recyclables from MSW Sources
- Shipments of Recyclables to Recycler Facilities and Brokers by Material Type
- Summary of Material Recycled from MSW and Non-MSW Sources
- Tires - Processor Summary Report
- Tires - Summary Report
- Username Report

Exports
- E-Cycle Collector/Recycler Export
- E-Cycle Manufacturer Export
- Recycling Activity Export
- Registered Composting Facility Export
- Solid Waste Land Disposal Export
- Solid Waste Processing Facility Export
- Tires - Raw Data Export
- Tires - Transporter Export
Run Time Criteria

SHIPMENTS OF RECYCLABLES BY MATERIAL TYPE AND DESTINATION

Program: INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT SOLID WASTE AND RECYCLING DATA REPORTING

Year:
2016

Member:
All Members

Response Status:
Verified

Report will only include responses that have no errors.

GENERATE REPORT
Voila, Results!

![Graph showing shipments of recyclables by material type and destination, 2016 (Tons)](image)

<table>
<thead>
<tr>
<th>MATERIAL TYPE</th>
<th>MATERIAL FROM MSW SOURCES</th>
<th>BROKERS (TONS)</th>
<th>INDIANA MANUFACTURERS / END USERS (TONS)</th>
<th>OUT OF STATE DESTINATIONS (TONS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>6,710.0</td>
<td>1,450.0</td>
<td>969.0</td>
<td>14,521.0</td>
</tr>
<tr>
<td>Paper</td>
<td>35,918.0</td>
<td>124,422.0</td>
<td>178,108.0</td>
<td>377,052.0</td>
</tr>
<tr>
<td>Plastic</td>
<td>3,768.0</td>
<td>6,294.0</td>
<td>371.0</td>
<td>13,684.0</td>
</tr>
<tr>
<td>Single Stream/Wire</td>
<td>124,711.0</td>
<td>873.0</td>
<td>0</td>
<td>68,637.0</td>
</tr>
<tr>
<td>Metal Ferrous</td>
<td>28,041.0</td>
<td>291.0</td>
<td>317.0</td>
<td>1,000.0</td>
</tr>
<tr>
<td>Metal Non Ferrous</td>
<td>2,212.0</td>
<td>350.0</td>
<td>5.0</td>
<td>2,439.0</td>
</tr>
</tbody>
</table>
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT SOLID WASTE AND RECYCLING DATA REPORTING

SHIPMENTS OF RECYCLABLES BY MATERIAL TYPE AND DESTINATION, 2016 (TONS)

Shipments of Recyclables by Material Type and Destination, 2016 (Tons)

2016

Indiana Recycler Facilities (Tons)

Brokers (Tons)
Recycling Rate > Waste Diversion Rate

Indiana previously relied on waste diversion numbers to show waste reduction efforts, which estimated the amounts of municipal waste kept from entering state landfills. The waste diversion rate was calculated by estimating the amount of waste generated based on changes in economics and population versus the amount that was actually disposed. In general, discussions regarding MSW diversion rates and recycling rates are often used interchangeably, although they are two separate measurements. Prior to this report, IDEM never calculated or reported a recycling rate, since the amount of municipal waste suitable for recycling was never required to be reported as a breakdown of particular recyclable materials, such as glass and plastics.

• But now we do. A recycling rate can be calculated to determine how Indiana is meeting its recycling goal by estimating the overall MSW generated against the materials reported as recyclable. The measurement standard established by the U.S. Environmental Protection Agency (U.S. EPA) is:

  Recycling Rate (%) = MSW recovered for recycling and composting (tons) / MSW Generation (tons) x 100
# It’s Not Just About Recycling

<table>
<thead>
<tr>
<th>MATERIAL TYPE</th>
<th>In-State Recycler Facilities (Tons)</th>
<th>Broker Arranged Shipments (Tons)</th>
<th>In-State Manufacturers / End Users (Tons)</th>
<th>Out-of-State Destinations (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass</td>
<td>6,379</td>
<td>2,364</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal, including white goods (ferrous)</td>
<td>15,383</td>
<td>2,618</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal (non-ferrous)</td>
<td>5,248</td>
<td>1,135</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper and cardboard (all grades)</td>
<td>30,135</td>
<td>52,941</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td>2,380</td>
<td>5,954</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Stream/Mixed</td>
<td>81,187</td>
<td>8,992</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>50,064</td>
<td>2,196</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>190,776</td>
<td>76,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-MSW Material</td>
<td>4,262</td>
<td>266</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>195,038</td>
<td>76,466</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Classification

- **Disposal through Landfilling (in-state)**: 5,395,895 Tons
  - The data are aggregated from IDEM Solid Waste Land Disposal Facility reports. This is the total amount of MSW from Indiana origins received at in-state landfills for disposal. It does not include non-hazardous industrial process wastes, and construction and demolition (C&D) debris.

- **Disposal through Landfilling (out-of-state)**: 269,070 Tons
  - This amount was estimated from Solid Waste Processing Facility reports from transfer stations as reported for waste sent for disposal at out-of-state landfills.

- **Energy from Waste**: 443,344 Tons
  - The data are aggregated from Solid Waste Processing Facility reports. This is the total amount of MSW from Indiana origins received at the Indianapolis Resource Recovery facility for disposal. It does not include non-hazardous industrial process wastes, and C&D debris.

- **Recycling**: 467,318 Tons
  - The data are aggregated from Recycling Activity Reports. This is the total amount of recyclables from MSW as reported by shipments to (a) in-state manufactures/end users, (b) out-of-state destinations, and (c) arranged through brokers.

- **Composting**: 343,921 Tons
  - The data are aggregated from Registered Composting Facility Reports. This is the total estimated amount of waste received at Indiana compost facilities including yard trimmings, food waste, and other organic materials. It does not include wood waste processed into mulch.

**Total**: 6,919,548 Tons
2016 Recycling Activity Results

• The full report is available on the Recycling Activity Reporting webpage

• The 2016 Recycling Activity Summary is ready, and here are some of the results:
  – Recycling rate: 16.7% (up 5% from 2015)
  – Total shipments of recyclables: 899,728 tons (up 48% from 2015)
  – Reporting facilities: 144 (up 25% from 2015)
Recycling Rate Improvement

• Twenty-nine more facilities submitted Recycling Activity Reports
• Recyclable materials collection may have increased
• Additional convenience of reporting for facilities with the creation of the electronic E-waste reports, which were not available in 2015
• Full calendar year of reporting, some reporters only reported part of the year for 2015
## Shipments of Recyclables

<table>
<thead>
<tr>
<th>Material Type (MSW only)</th>
<th>2015 (Tons)</th>
<th>2016 (Tons)</th>
<th>Change (Tons)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper and cardboard (all grades)</td>
<td>192,838</td>
<td>628,494</td>
<td>435,656</td>
<td>69.32%</td>
</tr>
<tr>
<td>Other</td>
<td>161,220</td>
<td>161,924</td>
<td>704</td>
<td>0.43%</td>
</tr>
<tr>
<td>Single Stream/Mixed</td>
<td>84,968</td>
<td>69,510</td>
<td>-15,458</td>
<td>-22.24%</td>
</tr>
<tr>
<td>Plastic and plastic products</td>
<td>15,002</td>
<td>18,552</td>
<td>3,550</td>
<td>19.14%</td>
</tr>
<tr>
<td>Glass</td>
<td>6,432</td>
<td>16,936</td>
<td>10,504</td>
<td>62.02%</td>
</tr>
<tr>
<td>Metal, including white goods (ferrous)</td>
<td>3,379</td>
<td>1,518</td>
<td>-1,861</td>
<td>-55.08%</td>
</tr>
<tr>
<td>Metal (non-ferrous)</td>
<td>3,479</td>
<td>2,794</td>
<td>-685</td>
<td>-19.69%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>467,318</strong></td>
<td><strong>899,728</strong></td>
<td><strong>432,410</strong></td>
<td><strong>48.06%</strong></td>
</tr>
</tbody>
</table>
# Reporting Facilities

## TABLE 1: Number of Facilities Submitting Recycling Activity Reports as Registered by Organization Type

<table>
<thead>
<tr>
<th>Organization Type</th>
<th>Number of Facilities Submitting Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycler Facility</td>
<td>87</td>
</tr>
<tr>
<td>Transfer Station</td>
<td>34</td>
</tr>
<tr>
<td>Compost Facility</td>
<td>10</td>
</tr>
<tr>
<td>Landfill</td>
<td>7</td>
</tr>
<tr>
<td>Waste-to-Energy Plant (Incinerator)</td>
<td>1</td>
</tr>
<tr>
<td>Processing Facility</td>
<td>1</td>
</tr>
<tr>
<td>Waste Tire Facility</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>144</strong></td>
</tr>
</tbody>
</table>

## TABLE 2: Number of Facilities Submitting Recycling Activity Reports by Principal Business Activity

<table>
<thead>
<tr>
<th>Principal Business Activity</th>
<th>Number of Facilities Submitting Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Waste Management Company</td>
<td>51</td>
</tr>
<tr>
<td>Solid Waste Management District /</td>
<td>76</td>
</tr>
<tr>
<td>Government</td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>14</td>
</tr>
<tr>
<td>Not-for-Profit</td>
<td>2</td>
</tr>
<tr>
<td>College / University</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>144</strong></td>
</tr>
</tbody>
</table>
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
SOLID WASTE AND RECYCLING DATA REPORTING

The Indiana Department of Environmental Management requires the reporting of solid waste and recycling data to document progress in meeting a 50% recycling goal for the state. Tracking includes municipal solid waste disposal at Indiana landfills, shipments of recyclables from Indiana recycler facilities, composting, and waste tire processing, storage, and transportation.

Indiana began requiring submittal of annual or quarterly reports of shipments of recyclables from Indiana recycler facilities July 1 2015. See an overview of the results in the 2015 Recycling Activity Summary.

https://recyclesearch.com/profile/idem